

REMARKS:

This Supplemental Amendment is responsive to the Notice Of Non-Compliant Amendment (37 C.F.R. § 1.121). Entry is respectfully requested.

CONCLUSION:

The Applicant respectfully submits that the application is in condition for allowance.

AUTHORIZATION:

The Commissioner is hereby authorized to charge any additional fees which may be required for this response, including all fees pursuant to 37 C.F.R. § 1.17 for its timely consideration, or credit any overpayment to Deposit Account No. 13-4500, Order No. 4355-4001.

Respectfully submitted,
MORGAN & FINNEGAN, L.L.P.

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By: 

Eric G. Wright
Registration No.: 48,045
(202) 857-8018 Telephone
(202) 857-7929 Facsimile

Correspondence Address

Morgan & Finnegan, L.L.P.
345 Park Avenue
New York, NY, 10154-0053

ATTACHMENT A

IN THE SPECIFICATION

Please delete the paragraph on Page 10, at line 17, which is composed of an incomplete sentence beginning with the term “by” and ending with “products.”.

Please replace the paragraphs beginning with paragraph 1, on page 14, at line 1, through paragraph 14, on page 14, commencing with line 21 and bridging the page to include line 1, of page 15, with the following paragraphs:

- - Figure 1a[A], 1b[B], and 1c[C] are alternate views of the structure of the cellulose of wood.

Figure 2 is a view of a chemical process for altering the cellulose structure of wood showing one method of altering the structure of a single strand of cellulose.

Figure 3 shows a generic representation of the formula shown in Figure 2.

Figure 4 shows one [alternate] alternative structural cellulose target.

Figure 5 shows an alternative target for the [structure of treated wood] structural cellulose target.

Figure 6a shows the product generated by the process taught herein [shows a representation of cellulose].

Figure 6b shows an alternative theoretical model for products by the process taught herein [a show one theoretical model for products by the process taught herein].

Figure 6c shows a chain of repeating units of cellulose [6c shows what the inventor thinks is the more likely product generated by the process taught herein].

Figure 7 (A[a]-C[c]) shows the most likely reaction with a silicon donor.

Figure 8 (A-D) shows an alternate embodiment of the invention. Figure 8(B1) and (B2) shows alternative intermediary boron molecules, which may be generated in the process.

Figure 9 shows an alternative mechanism for achieving an alternative to intermediary 8([b]B).

Figure 10 shows the production of an intermediary ([b]B) and a possible reaction using both boron and silicon (A[a]) to guarantee a polymer with silicon and boron in the modified cellulose structure (C[c]).

Figure 11 shows a genuine representation of a reagent with cellulose (A[a]). Here the reagent is generically listed as [R-Si - (X)] R'-Si(X)₃; where X is an [O-R] -OR group [compound] and R [being] is an alkyl group[;], halogen, or a hydroxyl group (OH).

Figure 12 shows a similar reaction to that shown in Figure 11 with a boron molecule substituted for the Silicon molecule. Alternative embodiments are shown as B[1] and [B2]C where two of the hydroxyl groups on the cellulose [which] are replaced.- -

Please replace page 15, 1st full paragraph, at line 2, with the following amended paragraph:

- - Figure 13 (A-C), shows a block diagram of a process to treat wood.- -

On Page 18, please replace the 4th full paragraph which commences at line 16 and bridges the page onto page 19, terminating at line 6, with the following amended paragraph:

- - In order to allow for use of more common reactants, it is envisioned, as shown in Figures 15 and 16, that a catalyst for the reaction could be provided by acids or molecules yielding acids. In this preferred embodiment, the process includes the steps of

- 1) Preparing a solution, preferably in alcohol (methanol or ethanol work well),
- 2) Adding a silicone donor which has one to eight carbon alkyloxy group (methoxy, octyloxy, etc.)
- 3) Adding a strong acid (hydrochloric, phosphoric or sulfuric acid) directly or by way of a catalyst yielding the acid in solution with the water in the wood such as methyl[]trichlorosilane ($\text{CH}_3[3]\text{SiCl}_3[3]$). In the preferred embodiment this is preferably an acid solution of 0.5%, but may range 5% to 0.1%. It may also be outside this range with less certain results since the acidity of the wood is not desirable for most uses.
- 4) Exposing the solution prepared in steps 1-3 to cellulose to allow binding as shown with or without time and pressure restrictions to limit the extent of treatment. - -